SECTION 16075
ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.01 PROVISIONS INCLUDED

A. The general provisions of the Contract, including General and Supplementary General Conditions, and Division 1 General Requirements, apply to work specified in this Section.

B. Requirements of Section 16050, "Basic Electrical Materials and Methods," apply to this Section.

1.02 SUMMARY

A. Work Included: This Section specifies identification systems for electrical products, equipment, and installations.

B. Related Work Specified in Other Sections:

1. Raceways, Section 16130.
2. Conductors, Section 16120.
3. Boxes, Section 16135.
4. Wiring devices, Section 16140.
5. Lighting fixtures, Section 16500.

1.03 REFERENCES

A. National Electrical Code (NEC)

1. 110-22: Identification of Disconnecting Means.
2. 200-6: Means of Identifying Grounded Conductors.
3. 760-4: Fire Protective Signaling Circuits.

1.04 SUBMITTALS

A. Product Data for each type of product specified.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. American Labelmark Co.

2. Cole-Flex Corp.

3. Ideal Industries, Inc.

4. LEM Products, Inc.

5. Markal Corp.

6. National Band and Tag Co.

7. Standard Signs, Inc.

8. W.H.Brady, Co.

2.02 ELECTRICAL IDENTIFICATION PRODUCTS

A. Underground Line Marking Tape: Permanent, bright-colored, continuous-printed, plastic tape compounded for direct- burial service not less than 6 inches wide by 4 mils thick. Printed legend indicative of general type of underground line below.

B. Nameplates: Engraved laminated phenolic black and white plastic with black as the background; engrave lettering by cutting through the black background so that the letters appear white. Unless noted on the drawings, letter size shall be 1/4 inch high. Include stainless steel pan head screws for attaching nameplates to equipment.

1. The equipment identification shall correspond to the designation on the drawings.

C. Panelboards: Prepare typed directories.

D. Wire and Cable Markers: Brady self-laminating vinyl Datab labels or acceptable equal.

E. Color Coded Marking Tape for raceways and cables : Polyvinyl chloride, self-adhesive not less than 3 mils thick and 1-1/2 inch wide, suitable for use on 90 degree C conductors, UL listed. Furnish in colors scheduled.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Renovation Projects: For alterations and additions to existing facilities, use existing identification system. Where systems have not been standardized, use the identifying and marking system specified in this standard.

B. Lettering and Graphics: Coordinate names, abbreviations, colors, and other designations used in electrical identification work with corresponding designations specified or indicated. Install numbers, lettering, and colors as approved in submittals and as required by code.

C. Install identification devices in accordance with manufacturer's written instructions and requirements of the referenced Electrical code.

D. Sequence of Work: Where identification is to be applied to surfaces that require finish, install identification after completion of finish work.

E. Distribution Equipment: Identify major components of the distribution system (such as switchboard, panels, disconnect switches) with nameplates. Nameplates on disconnect switches and control stations shall identify the equipment served.

F. Conductors: Provide color coding for wire and cable used for branch circuit in accordance with Section 16120, "Conductors."

G. Circuit Tagging and Identification: Identify power, control, and instrument circuit cables with the circuit and conductor identification nomenclature shown on the drawings, in accordance with the following:

1. Identify branch circuits in the pull boxes or panels in which they connect.

2. Label with two separate wire markers each conductor of single or multiconductor control or instrument cables. The first marker shall display the designated equipment/terminal identification number of the nearest equipment to which the conductor terminates. The second marker shall display the designated equipment/terminal identification number to which the opposite end of the conductor or cable is terminated.

H. Ground Fault Protected Devices: Identify devices protected by personnel ground fault interrupters. Receptacles not otherwise identified by the manufacturer shall have cover plates with the works "Protected by GFI".

1. If device is protected by a remote panel circuit breaker, also indicate on the cover plate the panel and circuit identifications.

2. If device is protected by GFCI receptacle with feed-through feature, indicate on the cover plate the GFCI receptacle location.

I. Terminal Blocks: Attach numbered nameplates to terminal blocks which require identification numbers; use the designations shown on the wiring diagrams. Install nameplate at the top of vertically mounted terminal blocks and at the end of horizontally mounted terminal blocks. Using permanent ink, fill out the terminal block marking strips; indicate the individual terminal point designation shown on the wiring diagrams.

J. Lighting and Receptacle Outlet Boxes: Identify with the panel and circuit number.

K. Panelboard directories shall identify the load name and location (i.e. AHU-1, Room # , FCU-1, Room # ).

L. Tag or label conductors as follows:

1. Future Connections: Conductors indicated to be for future connection or connection under another contract with identification indicating source and circuit numbers.

2. Multiple Circuits: Where multiple branch circuits or control wiring or communications/signal conductors are present in the same box or enclosure (except for three-circuit, four-wire home runs), label each conductor or cable. Provide legend indicating source, voltage, circuit number, and phase for branch circuit wiring. Phase and voltage of branch circuit wiring may be indicated by mean of coded color of

conductor insulation. For control and communications/signal wiring, use color coding or wire/cable marking tape at terminations and at intermediate locations where conductors appear in wiring boxes, troughs, and control cabinets. Use consistent letter/number conductor designations throughout on wire/cable marking tapes.

3. Match identification markings with designations used in panelboards shop drawings, Contract Documents, and similar previously established identification schemes for the facility's electrical installations.

END OF SECTION 16075